An Analysis of

An Economic Report to the Governor of the State of Tennessee on the State's Economic Outlook

A Report to the State Funding Board

prepared by

Dr. Phillip E. Doss
Senior Research Analyst

Comptroller of the Treasury
Office of Research

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Introduction

Each year the Center for Business and Economic Research (CBER) at the University of Tennessee publishes *An Economic Report to the Governor*. The report contains forecast values for key economic variables and commentary on the extent to which changes in these variables may affect local, regional, state and national economies. CBER derives its forecast for the United States from the forecast of Wharton Econometric Forecasting Associates (WEFA); the forecast and analysis for Tennessee is derived from the Tennessee Econometric Model (TEM). Both the U.S. and Tennessee forecasts presented in *An Economic Report to the Governor* are based on data from November 1996.

The Tennessee State Funding Board is required by statute to comment on the reasonableness of the forecasted growth rate of the state's economy, as measured by the growth rate of nominal personal income in Tennessee. The forecasted growth rate is used as a basis for determining the increase in appropriations from state tax revenues for the next fiscal year. The purpose of this paper is to assist the Tennessee State Funding Board in its consideration of CBER's forecast for 1997.

Forecast Summary: U.S.

Gross Domestic Product

Gross Domestic Product (GDP). By alternating quarters of strong and moderate performance GDP averaged about 2.5% inflation-adjusted growth in 1996, a healthy increase by historical standards. WEFA and CBER were among those surprised by the Department of Commerce advance estimate of 4.7% growth in the fourth quarter. The advance estimate was later revised downward to 3.8%. WEFA (CBER) had predicted only a lackluster 1.8% improvement for the period. Other forecasters, e.g. Macroeconomics Associates, also expected the fourth quarter growth report to be revised downward once export figures were reported.[2]

GDP Growth by Quarter: 1996 (92$)[1] Dept. of Commerce: Final Revision			
I	**II**	**III**	**IV**
2.0%	4.7%	2.1%	3.8%

Table 1

For 1997, WEFA (CBER) predicts GDP to grow at a moderate pace, about 2.0%, and suggests significant variation across the categories of GDP. The Congressional Budget Office concurs in the forecasted moderation (2.3% growth), and in the areas of concern: "The components of demand that are expected to hamper GDP growth over the next two years . . . are net exports, housing and, most important, producers' durable equipment."[4]

GDP Growth by Quarter: 1997 (92$)[3] WEFA (CBER) Forecast				
I	**II**	**III**	**IV**	**Year**
1.9%	1.7%	2.2%	2.1%	**2.0%**

Table 2

However, at the end of 1996, economic fundamentals (e.g. personal income, home sales and factory orders for durable goods) indicated a

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[1] The seasonally adjusted annual rate is an average of % change quarter to quarter.

[2] *Washington Post* (online—http://washingtonpost.com), February 4, 1997, p. 2. *The Post* notes that "...Commerce Department economists have to make an assumption about trade for the final month of a quarter when they put out their first estimate for the period..." (2). With more complete data the estimate was revised downward to 3.9%, and revised further to 3.8%.

[3] *An Economic Report to the Governor, 1997,* p. A-1. The seasonally adjusted annual rate is an average of % change quarter to quarter.

[4] Congressional Budget Office, *The Economic and Budget Outlook*, January 1997, p. 12.

continuation of above average growth. Indeed, the Bureau of Economic Analysis (BEA) advance estimate of GDP growth for the first quarter of 1997 was 5.6%.[5] WEFA (CBER) had forecast 1.9%. Growth in personal consumption expenditures and expenditures for producers durable equipment were significant factors in the increase.

WEFA (CBER) expects ***personal consumption expenditures***, which account for approximately 2/3 of GDP, to grow by 2.1% in 1997. CBER's caveat for this category concerns the high debt-to-income ratio of the consumer sector. On one hand, CBER cites WEFA's finding that "while consumer spending is a leading indicator of the debt-to-income ratio, the debt-to-income ratio is not useful as a predictor of consumer spending" (4). On the other hand, CBER cautions that "the high debt-to-income ratio . . . does limit the consumer's role as engine of growth" (5). What this means is that CBER does not expect the consumer sector to restrain GDP growth, but neither, most likely, will it be responsible for spurring GDP growth.

Recent economic statistics indicate the volatility of this category of GDP. The BEA reports that personal consumption expenditures rose 1.2% in January, while personal income rose only 0.3%. However, in February, personal income rose 0.8% while personal consumption expenditures rose only 0.5%. In March, income and spending were more closely correlated. Personal income was up 0.6%, and personal consumption expenditures were up 0.5%.[6] If recent estimates hold, personal consumption expenditures will have increased 2.2% in the first quarter, exceeding the WEFA (CBER) forecast for all of 1997.

Gross private domestic investment, which accounts for approximately 1/5 of GDP, is expected to grow by 4.7%. CBER notes that this category of GDP is a significant indicator of the economy's direction ". . . since downturns in business investment spending often precede downward cyclical movements in GDP" (5). The desired effect of most private investment is an increase in productivity, an effect that was evident in 1996. Productivity in the U.S. increased 0.8% in 1996, highest

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[5] Bureau of Economic Analysis wire transmission press release, April 30, 1997 [online—http://www.bea.doc.gov/bea/newsrel/gdp197ah.txt].

[6] Bureau of Economic Analysis wire transmission press release, May 1, 1997 [online—http://www.bea.doc.gov/bea/newsrel/pi0397h.txt]. Figures for January and February are revised from previous estimates.

in four years and near the average of productivity increases since the 1970s.[7]

Government consumption and gross investment are expected to remain nearly flat at 0.5%. Low inflation is one factor that accounts for slow growth in this category, because the prices of goods and services purchased by government agencies have not increased appreciably. It is not yet clear what overall effect shifts in administrative responsibilities from federal to state levels will have on this category of GDP.

Net exports are expected to decrease by 0.3%. The net exports category is determined by the difference between exports, which are expected to grow 6.0%, and imports, which are expected to grow 6.3%. Thus, even with healthy export growth, *net exports* will shrink because imports will grow even more. The primary factors expected to bring about the reduction in net exports are the strength of the dollar (which is based upon the strength of the U.S. economy) and slower growth in foreign economies. A strong dollar makes imported goods more affordable vis à vis goods with significant U.S. content. The dollar continued to rise after the Federal Reserve raised interest rates by 0.25% in March. Although higher U.S. interest rates tend to slow economic expansion, they also make dollar-denominated investments more attractive than investments in foreign currencies.

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[7] Department of Labor figures reported in *USA Today* [online—http://www.usatoday.com/money/mds9.htm], February 11, 1997, p 1.

WEFA (CBER) comparison with other forecasting organizations. The following table presents a selection of other forecasting agenices. As was the case in 1996, the WEFA (CBER) forecast (2.0%) is below the average of the other agencies (2.3%).

Forecast Comparison: 1997 Gross Domestic Product Percentage Growth (92$)[8]					
Agency	**Q1**	**Q2**	**Q3**	**Q4**	**Year**
UCLA	2.5	2.2	2.4	2.4	2.4
Merrill Lynch	1.8	1.8	2.2	2.2	2.0
Dupont	2.3	2.3	2.3	2.0	2.2
Georgia State	3.2	2.5	2.6	1.8	2.5
Northern Trust (Oct)	2.7	1.9	2.2	1.5	2.1
Conference Board	2.3	3.6	2.0	1.2	2.3
Eaton	2.9	2.5	2.6	3.1	2.8
Macroeco. Adv. (Oct)	2.2	2.0	1.8	1.9	2.0
Data Resources Inc.	2.4	2.5	2.7	2.9	2.6
Reg. Fin. Assoc.	2.6	2.8	2.2	1.8	2.4
Michigan-RSQE	3.1	2.4	2.1	2.1	2.4
Blue Chip	2.3	2.3	2.3	2.3	2.3
CBO	2.3	2.3	2.3	2.3	2.3
WEFA (CBER)	**1.9**	**1.8**	**2.2**	**2.2**	**2.0**
Forecast Average	**2.5**	**2.4**	**2.3**	**2.3**	**2.3**
Forecast Range: Low	1.8	1.8	1.8	1.2	2.0
Forecast Range: High	3.2	3.6	2.7	3.1	2.8

Table 3

[8] This table is compiled from information contained in *The Economic and Budget Outlook*, Congressional Budget Office, January 1997, p. 13, and *Economic Times*, Vol. 7, No. 10, November-December, p. 19. Forecasts were made in November 1996, except for Northern Trust and Macroeconomic Advisers, which were made in October 1996, and CBO and Blue Chip, which were published in January 1997. The annual rate is an average of % change quarter to quarter.

Unemployment

Unemployment Rate and Job Growth. WEFA (CBER) forecasts a U.S. unemployment rate of 5.5% in 1997, slightly higher than the average of other forecasting agencies (5.3%), but low enough to indicate that the economy is "near full employment by historical standards" (4). Jobs are being lost through downsizing and reorganization, but employment sector shifts (primarily to services) mean that jobs are also being "created" in significant numbers. However, an economy experiencing "full employment" will necessarily, in the absence of inmigration, experience slow absolute job growth. Accordingly, WEFA (CBER) predicts that the number of U.S. jobs will increase only 1.7% in 1997 (15).

Forecast Comparison: 1997[9]
Unemployment Percentage Rate

Agency	Year
UCLA	5.2
Merrill Lynch	5.2
Dupont	5.4
Georgia State	5.0
Northern Trust (Oct)	5.5
Conference Board	4.7
Eaton	5.4
Macroeco. Adv. (Oct)	5.7
Data Resources Inc.	5.5
Reg. Fin. Assoc.	5.4
Michigan-RSQE	5.3
Blue Chip	5.3
CBO	5.4
WEFA (CBER)	**5.5**
Forecast Average	**5.3**
Forecast Range: Low	4.7
Forecast Range: High	5.7

Table 4

Tight labor markets usually cause upward pressure on inflation, but that has not been the case in recent years, primarily because wages have not increased significantly. In the March update of its "Beige Book" the Federal Reserve Board noted that "almost every district report[ed] difficulty finding and retaining new workers" (2), while at the same time "in nearly every district, nominal wage gains show[ed] no signs of breaking out of the 3 to 4 percent range" (3).[10]

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[9] This table is compiled from information contained in *The Economic and Budget Outlook*, Congressional Budget Office, January 1997, p. 13, and *Economic Times*, Vol. 7, No. 10, November-December, p. 19. Forecasts were made in November 1996, except for Northern Trust and Macroeconomic Advisers, which were made in October 1996, and CBO and Blue Chip, which were published in January 1997.

[10] Federal Reserve Board, "Summary of Commentary on Current Economic Conditions" [online—http://www.bog.frb.fed.us/fomc/bb/current/summary.htm], March 13, 1997.

Some economists have suggested that job insecurity helps explain this anomaly. Historically, blue-collar workers "face higher displacement rates than do workers in the white-collar categories." [11] While blue-collar workers suffer decreased job opportunities during economic downturns, white-collar displacement rates have usually been more stable. However, displacement rates for white-collar workers increased significantly during the early part of this decade, due not only to the 1991 recession, but also to widespread corporate reorganization. Since then, displacement rates for white collar workers "have remained approximately at their recessionary levels" (Valletta, 2). According to this explanation, what has historically been a blue-collar issue has become a more general labor issue, has been more prominent in the national media, and has affected wage demands.

Inflation

Although ***inflation*** rates have been low in recent years, the *threat* of inflation has not failed to influence monetary policy. The chairman of the Federal Reserve expressed the opinion that the exuberance evident in the stock market would "foster a general process of asset price inflation that [could] feed through into markets for goods and services."[12] The Consumer Price Index (CPI) increased only 0.3% in February,[13] and the Producer Price Index actually declined 0.4% in February, following a 0.3% decrease in January.[14] In addition, some economists have argued that the CPI is unreliable as a measure of inflation because the goods and services upon which it is calculated are not representative of actual consumer purchases. They argue that consumer inflation is actually lower than reported.

Nevertheless, food and energy prices have been especially volatile, and price increases in those areas will eventually work through to core measures. With that in mind, and perhaps to restrain the appreciation in equity markets, the Federal Reserve raised interest rates 0.25% in

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[11] Rob Valletta, "Job Loss during the 1990s," Federal Reserve Bank of San Francisco Economic Letter, Number 97-05, February 21, 1997, p. 2.

[12] Excerpted from testimony before the Senate Banking Committee, February 26, 1997, *USAToday*, online—[http://www.usatoday.com/money/mds4.htm], February 27, 1997, p. 1.

[13] Bureau of Labor Statistics wire transmission press release March 19, 1997 [online—http://stats.bls.gov/news.release/cpi.nws.htm].

[14] Bureau of Labor Statistics wire transmission press release March 14, 1997 [online—http://stats.bls.gov/news.release/ppi.nws.htm].

March, making it clear once again that sustained moderate growth with low inflation is the goal of the Federal Reserve's monetary policy.

WEFA forecasts an inflation rate of 2.5% for 1997, as measured by both the implicit deflator for GDP and the personal consumption deflator (1992=100).

Treasury Bonds

Federal funds and 30 year treasury bonds. WEFA (CBER) expects the federal funds rate to average 5.0% for 1997 (9). The federal funds rate is the rate banks charge each other for overnight loans made to meet reserve requirements. The Federal Reserve raised the federal funds rate to 5.5% on March 25, but chose to leave the discount rate at 5.0%. The discount rate is the rate the Federal Reserve charges banks.

WEFA (CBER) forecasts a 30 year treasury bond rate of 6.4%, the lowest of this group of forecasters and 0.3% below the average. After the Federal Reserve rate increase, the 30 year treasury bond rate rose to 6.97%. Perhaps upon the implied threat of future rate increases, the 30 year treasury bond rate rose above 7.1% near the end of March, but had again fallen to 6.9% by the end of April.

Forecast Comparison: 97
Thirty Year Treasury Bonds[15]

Agency	Rate
UCLA	6.6%
Merrill Lynch	6.6%
Dupont	6.5%
Georgia State	6.7%
Northern Trust (Oct)	7.2%
Conference Board	7.5%
Eaton	7.0%
Macroeco. Adv. (Oct)	6.5%
Data Resources Inc.	6.6%
Reg. Fin. Assoc.	6.9%
Michigan-RSQE	6.6%
WEFA (CBER)	**6.4%**
Forecast Average	**6.7%**
Forecast Range: Low	6.4%
Forecast Range: High	7.5%

Table 5

[15] This table is compiled from information contained in *Economic Times*, Vol. 7, No. 10, November-December, p. 19. All forecasts were made in November 1996, except for Northern Trust and Macroeconomic Advisers, which were made in October 1996.

Forecast Summary: Tennessee

Income

Nominal Personal Income. CBER expects nominal personal income in Tennessee to increase 5.5% in 1997. Unlike 1996, the gains are for the most part evenly distributed across categories. However, the categories of *rent, interest & dividends* and *proprietors' income* continue to build on significant 1996 percentage increases of 7.2% and 7.4%. Tennessee personal income continues to approach the U.S. average, though the speed of that approach is decreasing. Indeed, the BEA reports that Tennessee is among the slowest growing states in *per capita personal income.*[16] WEFA (CBER) forecasts U.S. personal income to grow 4.4% in 1997. CBER reports that in 1996 "per capita personal income in Tennessee was 91 percent of the national average" (13).

Tennessee Nominal Personal Income Growth: 1997	
Wages and Salaries	5.6%
Other Labor Income	5.5%
Proprietors' Income	5.7%
Rent, Interest & Dividends	5.5%
Transfer Payments	5.5%
Total	**5.5%**

Table 6

In last year's report CBER issued this caution in regard to the shift in administrative reponsibilities for major social programs from the federal to the state level: "While states are likely to benefit from the increased flexibility associated with block grants, these benefits must be weighed against the losses states will face in the form of reduced federal funds" (*An Economic Report to the Governor: 1996*, 86). In addition to reduced funds from this policy trend, Tennessee will be adversely affected by the convergence of Tennessee personal income with U.S. personal income. For example, the federal assistance percentages for Foster Care and Adoption Assistance programs and for TENNCARE are determined by formulas that include per capita personal income as a variable. Of the requested FY 97-98 improvements in the governor's budget for TENNCARE, $39.2 million will not be used to

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[16] "Hawaii, Alaska, Wyoming, **Tennessee**, Montana, and Maryland were the states with the slowest growth in per capita income; increases in per capita income in these states ranged from 1.7 percent to 3.3 percent. In all six states, increases in personal income were less than the U.S. average, and except in Montana and Tennessee, increases in population were less than the U.S. average." Bureau of Economic Analysis wire transmission press release April 28, 1997 [online—http://www.bea.doc.gov/bea/newsrel/spi496h.txt].

expand or improve services, but to replace federal funds with state funds.[17]

Other measures of personal income. CBER also forecasts growth estimates for other measures of personal income. As was true in 1996, forecasted growth in the inflation-adjusted categories of *per capita personal income* and *annual wages per worker* lag significantly behind other measures, even though inflation has been moderate in 1996 and is

Other Measures of Personal Income Growth: 1997	
Nominal personal income	5.5%
Inflation-adjusted personal income	3.0%
Inflation-adjusted *per capita* personal income	1.6%
Inflation-adjusted average annual *wages per worker*	1.0%

Table 7

forecast to remain so in 1997. CBER suggested in last year's report that inflation adjusted per capita personal income might be a "better measure of individual income gains" than nominal personal income (*An Economic Report to the Governor: 1996*, 42).

The relationship between personal income and state revenues. The state constitution relates growth in the *state budget* to growth in personal income. Tennessee's tax structure, however, for the most part relates growth in *state revenues* to growth in sales. Depending upon the particular characteristics of economic growth, Tennessee can benefit or suffer from its tax structure. Inflation, for example, can actually enhance state tax revenues. The sales tax captures economic growth to the extent that there is increased economic activity; but it also captures inflationary growth. For a tax structure dependent upon sales taxes, economic growth accompanied by high inflation provides a double

[17] The "Federal medical assistance percentage" is equal to "100 percentum less the State percentage; and the State percentage shall be that percentage which bears the same ratio to 45 per centum as the square of the per capita income of such State bears to the square of the per capita income" of the United States [online—http://www.law.cornell.edu/uscode/42/1396d.html]. The Office of Research, Comptroller of the Treasury estimates that if TN/US personal income convergence continues at the current rate, federal financial participation in TENNCARE will decrease at about 1% per year. If the rate of convergence slows, the rate of the reduction in federal financial participation will slow accordingly.

boost to tax revenue. To the extent, however, that growth in income is not translated into growth in taxable sales, revenues suffer.

State tax revenues across the nation have trended higher in recent years. However, in 1996 that growth was primarily in revenues from personal income taxes (7.7%). Revenues from sales taxes grew more moderately (5.5%), and from corporate income taxes more slowly still (1.4%).[18] CBER offers a caution in regard to Tennessee's sales tax collections: "This [downward] trend in sales tax collections is especially disturbing in light of the relative strength of the state economy" (14). CBER's forecast for taxable sales reflects this concern: "Even without a recession, history suggests that future quarters will be characterized by somewhat slower growth in taxable sales and sales tax collections than has been the case in recent years" (14).

One explanation for the lack of correlation between economic growth and taxable sales is the length of the current economic expansion. During recessions or periods of slow growth consumers often postpone purchases of durable goods, those "big ticket" items that not only generate manufacturing activity but also generate sales tax revenue. Because the current expansion has lasted approximately six years, the relationship between personal income and demand for consumer durables has been normalized.

Per Capita Taxable Sales. Strong growth with low revenue may not be the economic anomaly it appears to be. A Federal Reserve Bank of Atlanta study found that for the most part "states with high [economic] growth rates also have relatively low tax revenues."[19] For the most part, businesses, and business activity, gravitate toward low-tax environments. The implication is that Tennessee, and the Southeast generally, have experienced stronger than average economic growth *because* they are low revenue.

Economic growth has also been accompanied by population growth. CBER reports that in the period 1990-1995 Tennessee's population increased 7.8%. Some areas of the state experienced significantly higher growth rates. The population in ten counties

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[18] Center for the Study of the States, *State Fiscal Brief*, No. 40, p. 1. Percentage growth is in current dollars.

[19] Zsolt Becsi, "Do State and Local Taxes Affect Relative State Growth?", *Economic Review*, Federal Reserve Bank of Atlanta, Vol. 81, No. 2, March/April 1996, p. 28.

increased more than 15% in this same time period.[20] Rapid population growth accompanied by moderate taxable sales growth means that *per capita taxable sales growth* will be slow. Although CBER notes that a "strong sales tax pattern" (14) obtained from 1992-1995, their estimate for inflation-adjusted per capita taxable sales growth for 1996 is only 1.0%, and is below 1.0% for the next two years.

The implications of this forecast could be far reaching. It means that the amount of state revenue per person from taxable sales will grow very slowly over the next two years; yet the increased number of persons in the state will mean an increased demand for governmental services and infrastructure. In addition, because some state programs are funded on a *per capita* basis, increases grow automatically with the population. The BASIC EDUCATION PROGRAM is an example. Statewide, the average daily membership of local education agencies is growing at about 1.5% per year. However, several school systems have experienced growth in excess of 4% per year since 1991/92.[21]

Per Capita Taxable Sales Growth (92$)					
1993	**1994**	**1995**	**1996**	**1997**	**1998**
3.7%	5.3%	3.7%	1.0%	0.7%	0.7%

Table 8

For the most part, the recent increase in population has been accommodated by utilizing existing infrastructure and service delivery systems, though in some areas traffic congestion and school over-crowding are evidence of near-capacity utilization. The Funding Board may wish to consider whether recent strong population growth coupled with a forecast of sluggish per capita taxable sales growth are significant in regard to future state and local revenue needs.

Forecast error. With the exception of 1996, CBER has been consistent in producing conservative forecast estimates of nominal personal income growth. CBER forecast a nominal

Tennessee Nominal Personal Income Forecast Error[22]			
Year	**Actual**	**Forecast**	**Error**
1990	6.3	5.8	-0.5
1991	5.0	4.9	-0.1
1992	8.7	5.0	-3.7
1993	5.9	5.8	-0.1
1994	7.0	6.7	-0.3
1995	6.9	5.9	-1.0
1996	4.6	5.6	+1.0

Table 9

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[20] Williamson, Rutherford, Montgomery, Lake, Maury, Cheatham, Johnson, Jefferson, Sevier, Cumberland.

[21] Average daily membership growth analysis provided by the Office of Education Accountability, Comptroller of the Treasury.

[22] The "actual" figures for 1996 are estimates as of November 1997.

personal income growth of 5.6% for 1996; the current estimate for 1996 is 4.6%. More important, perhaps, than this forecast error is the fact that the lower-than-expected personal income growth comes in the midst of healthy economic activity in most regions of the state.

Unemployment Rate and Job Growth. CBER forecasts an average unemployment rate in Tennessee of 5.1% in 1997. CBER expects total nonagricultural employment in Tennessee to increase 2.0% in 1997.

CBER forecasts that Tennessee will maintain higher job growth rates than the U.S. throughout 2005, but growth will not be spread evenly across sectors. Manufacturing employment in Tennessee declined 2.3% in 1996. For 1997 CBER forecasts manufacturing employment to remain essentially at current levels. A 1.1% increase in durable goods manufacturing employment is expected to offset a 1.3% decrease in non-durable goods manufacturing employment.

Non-Agricultural Jobs Percentage Growth	1996	1997	1998	1999
Tennessee	2.5	2.0	2.1	2.6
U.S.	2.0	1.7	1.4	1.4

Table 10

CBER forecasts strong percentage growth in the construction sector (4.8%), but in a continuing trend the greatest number of jobs is expected to be created in trade (19,700 jobs, 3.2% growth) and services (22,400 jobs, 3.4% growth). As noted in this analysis last year, wages in the trade and services sector are traditionally lower than in the manufacturing sector. CBER forecasts the average annual wage and salary rate for manufacturing to be $28,401 (2.0% growth from 1996). Jobs in the trade sector, on the other hand, will pay an average of $18,147 (0.6% growth from 1996). Jobs in the services sector include some high-paying professions and will pay an average of $22,855 (1.0% growth from 1996).

CBER forecasts agricultural employment in Tennessee to decline by nearly 3% annually throughout the forecast horizon (2005).

Gross State Product (GSP). The U.S. has been enjoying sustained economic growth. As was true last year, CBER's outlook for the production of goods and services in Tennessee is brighter than the outlook for the U.S. as a whole. CBER forecasted GSP growth of 3.7% for 1996 (87$); the latest estimates for 1996 show growth at 4.0% (92$). For 1997, GSP should grow at a 3.7% rate, and continue to grow well above the 3% rate throughout the forecast horizon (2005).

Conclusion

Given the 4.0% growth of the Tennessee economy in 1996 (92$), CBER's forecast of 3.7% GSP growth for 1997 appears reasonable.

CBER's forecast of 5.5% growth in Tennessee nominal personal income for 1997 also appears reasonable, given the historical correlation between economic growth and personal income growth. However, the Funding Board may wish to consider that the personal income forecast for 1996 was essentially the same as for 1997, and actual personal income growth for 1996 was approximately 1.0% less than forecast.

For budgetary purposes, the Funding Board may wish to consider: (1) the effects of low inflation on sales tax revenue growth; (2) the effects of the length of the economic expansion upon durable goods purchases; (3) the effects of the convergence of Tennessee personal income with U.S. personal income upon federal funding of programs; (4) the forecasted slow growth of per capita taxable sales.

Last year's analysis noted that "the [unequal] distribution of . . . growth over the categories of personal income [might] affect state revenues."[23] The rationale behind that caution was that wage earners were not enjoying the benefits of economic growth as much as might be expected, and were therefore not contributing as much as might be expected to sales tax revenues. The inequality of *growth* is not so apparent this year, though the inequalities of income distribution established during this growth period still obtain. Moreover, the current revenue shortfall indicates that the correlation between growth in the state's sales tax base and growth in the state economy has become questionable.

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[23] *An Analysis of An Economic Report to the Governor, 1996*, p. 9.

APPENDICES

Appendix A
Statutory Requirements

Tennessee Constitution
Article II, §24 (excerpt)

In no year shall the rate of growth of appropriations from state tax revenues exceed the estimated rate of growth of the state's economy as determined by law.

TCA §9-6-201

(a) The estimated rate of growth of the state's economy shall be based upon the projected change in Tennessee personal income.

(b) Tennessee personal income shall consist of those sources of income included in the United States department of commerce's definition of "personal income."

TCA §9-6-202

(a) At least once each year, and whenever requested to do so by the commissioner of finance and administration or by the joint request of the chairs of the finance, ways and means committees of the senate and house of representatives, the state funding board shall secure from the Tennessee econometric model a report of the estimated rate of growth of the state's economy. such report shall include the major assumptions and the methodology used in arriving at such estimate.

(b) Upon receiving the report specified in subsection (a), the state funding board shall make comments relating to the reasonableness of the estimate, including any different estimate the board deems necessary. The board shall also enclose a list identifying state tax revenue sources and nontax revenue sources, approved by the attorney general and reporter. The department of finance and administration shall provide to the board revenue estimates for each source.

(c) In the event data from Tennessee econometric model is unavailable, the funding board, after consulting with the finance, ways and means committees of the senate and house of representatives, shall obtain and/or prepare a report of the estimated rate of growth of the state's economy.

(d) The reports specified in subsections (a), (b) and (c) shall be forwarded to the commissioner of finance and administration and to each member of the general assembly, after review and definitive comment by the finance, ways and means committees of the senate and house of representatives.

(e)(1) In November of each year, the state funding board shall conduct public hearings to develop consensus estimates of state revenue for the upcoming fiscal year, as well as any revisions to the current fiscal year estimates, as the board deems appropriate.

(2) The funding board shall request economic forecasts and revenue estimates from representatives of state higher education institution business centers located in each of the grand divisions and such other groups or persons as the funding board deems appropriate.

(3) On December 1, or as soon thereafter as practical, the funding board shall present its state revenue estimates, along with a summary of the economic forecast upon which the estimates are based, to the governor and the chairs of the senate and house finance, ways and means committees. If, in the opinion of the funding board, circumstances warrant a review of state revenue estimates it has previously presented, or upon a request of the chairs, the funding board shall consider information it deems necessary and appropriate and may revise its state revenue estimates if appropriate. Any revision to is revenue estimates and reasons therefore shall be forwarded to the governor and chairs.

TCA §9-6-203 (excerpt)

(c) When in any budget document the percentage increase of recommended appropriations from state tax revenues exceeds the percentage increase of estimated Tennessee personal income as defined in ϶ 9-6-201, for the ensuing fiscal year, the governor shall submit a bill or bills for introduction in both houses of the general assembly which shall contain no other subject matter and shall set forth the dollar and percentage by which the estimated growth of the state's economy is exceeded by the appropriations of state tax revenue in accordance with article II, ϶ 24 of the Constitution of Tennessee.

(d) When the percentage increase of appropriations of state tax revenue by the general assembly exceeds the percentage increase of estimated Tennessee personal income as defined in ϶ 9-6-201, for the ensuing fiscal year, the general assembly shall by law containing no other subject matter, set forth the dollar and the percentage by which the estimated growth of the state's economy is exceeded by the appropriations of state tax revenue in accordance with article II, э 24 of the Constitution of Tennessee.

Appendix B
Years in which Appropriations have Exceeded Growth

Fiscal Year 1984-1985	$396,100,000	14.60 %
Fiscal Year 1985-1986	$58,000,000	1.79 %
Fiscal Year 1986-1987	$100,000,000	2.76 %
Fiscal Year 1988-1989	$101,000,000	2.38 %
Fiscal Year 1989-1990	$74,000,000	1.59 %
Fiscal Year 1991-1992	$703,100,000	15.09 %
Fiscal Year 1992-1993	$450,000,000	8.69 %

Appendix C
Personal Income Definition

Personal income is a measure of income received by individuals, unincorporated businesses, and non-profit organizations. While it is an important measure of economic activity, personal income is not limited to the wages and salaries of persons. For purposes of establishing this category, the Bureau of Economic Analysis of the U.S. Department of Commerce defines persons as “. . . individuals, non-profit institutions, private non-insured welfare funds, and private trust funds . . . .”

The components of personal income include:

1. wage and salary disbursements;
2. other labor income, including employer contributions for private insurance and retirement programs;
3. proprietors’ income, which consists of net income of sole proprietorships and non-incorporated businesses;
4. rental income, personal interest income, dividends and royalties;
5. transfer payments by businesses and government, corporate gifts to non-profit institutions, and other payments not resulting from current services or production.[24]

[24] U.S. Department of Commerce, Bureau of Economic Analysis.

Works Cited

An Analysis of An Economic Report to the Governor, 1996. Phillip E. Doss. Nashville: State Comptroller's Office of Research. 1996.

An Economic Report to the Governor. Knoxville: Center for Business and Economic Research, The University of Tennessee. January 1996.

An Economic Report to the Governor. Knoxville: Center for Business and Economic Research, The University of Tennessee. January 1997.

Bureau of Economic Analysis [online— http:// www. bea. doc.gov/bea].

Bureau of Labor Statistics [online—http://stats.bls.gov]

Center for Study of the States, *State Fiscal Brief*, No. 40.

Economic Times. New York: The Conference Board. November / December, 1996.

Federal Reserve Board [online—http://www.bog.frb.fed.us/fomc].

"Job Loss during the 1990s." Rob Valletta, *Federal Reserve Bank of San Francisco Economic Letter*, Number 97-05, February 21, 1997.

The Economic and Budget Outlook: Fiscal Years 1998-2007. The Congress of the United States, Congressional Budget Office. January 1996.

U.S. Code [online—http://www. law.cornell. edu/ uscode/ 42/ 1396d.html].

USA Today [online—http://www. usatoday.com/money].

Washington Post [online—http://washingtonpost.com].